

CLAIMS

1. A combustor liner comprising:
forward and aft panels joined together at a cooling nugget including an integral bridge having a lip extending aft from said forward panel and spaced from said aft panel to define a slot terminating in an outlet;
a thermal barrier coating covering inboard surfaces of said panels and lip with a nominal thickness; and
said lip having a distal end at said slot outlet being spaced from said coating aft of said slot less than about said coating nominal thickness.
2. A liner according to claim 1 wherein said slot has a height at said slot outlet, and said coating is as thick as about half said slot height.
3. A liner according to claim 2 wherein said lip has a thickness at said slot outlet, and said coating is thicker than said lip thickness.
4. A liner according to claim 3 wherein:
said cooling nugget includes a row of aperture inlets disposed in flow communication with said slot for channeling cooling air therethrough; and
said nugget inlets have a smaller collective flow area relative to said slot outlet at said coating.
5. A liner according to claim 4 wherein:
said aft panel has a thickness aft of said nugget, and said coating is as thick as about said panel thickness; and
said slot has an axial length-to-height ratio of about 2.8, and said coating is thicker than said lip thereon, and as thick as about half said slot height aft of said slot outlet.
6. A liner according to claim 5 wherein said nugget inlets extend axially through said

bridge, and said coating initiates on said aft panel with a ramp.

7. A liner according to claim 6 wherein said coating ramp initiates adjacent said slot outlet, is inclined at a shallow angle of about 45 degrees, and terminates at a spacing with said lip distal end less than about said coating nominal thickness.

8. A liner according to claim 5 wherein said nugget inlets extend transversely through said aft panel opposite to said lip of said forward panel, and said coating initiates on said aft panel with a blunt step.

9. A liner according to claim 8 wherein said coating step is spaced aft from said slot outlet, and is spaced from said lip distal end less than about said coating nominal thickness.

10. A liner according to claim 5 further comprising:

multiple annular panels joined together in turn at corresponding annular cooling nuggets;

one cooling nugget including axial inlets through said bridge for discharging said cooling air from said slot outlet over a shallow ramp initiating said thermal barrier coating adjacent said slot outlet; and

another cooling nugget including transverse inlets aft of said bridge opposite to said lip for impinging said cooling air against said lip for discharge from said slot outlet over a blunt step initiating said thermal barrier coating aft of said slot outlets.

11. A combustor liner comprising:

a plurality of panels axially joined together at an integral cooling nugget;

said nugget including a bridge joining a downstream end of a forward panel to an upstream end of an adjacent aft panel, and a lip extending from said forward panel at said bridge and spaced from said aft panel to define a slot therebetween having an outlet;

said nugget further including a row of aperture inlets for receiving cooling air for discharge through said slot outlet;

-15-

said panels including inboard surfaces covered with a thermal barrier coating having a nominal thickness along said lip and aft of said slot outlet; and

said lip having a distal end at said slot outlet being spaced from said coating aft of said slot less than about said coating nominal thickness.

12. A liner accordingly to claim 11 wherein said nugget inlets have a smaller collective flow area relative to said slot outlet at said coating.

13. A liner accordingly to claim 12 wherein said slot has a height at said slot outlet, and said coating is as thick as about half said slot height.

14. A liner accordingly to claim 12 wherein said aft panel has a thickness aft of said nugget, and said coating is as thick as about said panel thickness.

15. A liner accordingly to claim 12 wherein said lip has a thickness at said slot outlet, and said coating is thicker than said lip thickness.

16. A liner accordingly to claim 12 wherein said slot has an axial length-to-height ratio of about 2.8, and said coating is thicker than said lip thereon, and as thick as about half said slot height aft of said slot outlet.

17. A liner accordingly to claim 12 wherein said nugget inlets extend axially through said bridge, and said coating initiates on said aft panel with a ramp.

18. A liner accordingly to claim 17 wherein said coating ramp is shallow.

19. A liner accordingly to claim 17 wherein said coating ramp initiates adjacent said slot outlet, and terminates at a spacing with said lip distal end less than about said coating nominal thickness.

-16-

20. A liner accordingly to claim 12 wherein said nugget inlets extend transversely through said aft panel opposite to said lip of said forward panel, and said coating initiates on said aft panel with a blunt step.

21. A liner accordingly to claim 20 wherein said coating step is spaced aft from said slot outlet.

22. A liner accordingly to claim 21 wherein said coating step is spaced from said lip distal end less than about said coating nominal thickness.